DOCUMENT RESUME

ED 184 145 CS 205 474

AUTHOR Van Kleeck, Anne
TITLE A Linguistic Comparison of Talkative and Reticent Three Year Olds.
PUB DATE Apr 80
NOTE 29p.: Paper presented at the Annual Meeting of the American Educational Research Association (Boston, MA, April 7-11, 1980).

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Child Language: Comparative Analysis; Developmental Stages; Discourse Analysis; *Language Acquisition; *Language Research; *Linguistics; Preschool Children
IDENTIFIERS *Reticence

ABSTRACT

An exploratory study investigated the communicative behaviors that differentiate talkative from reticent children. Four three-year-old girls who varied in degree of talkativeness were observed in naturalistic interactions with six to eight previously unfamiliar adults. All four children had demonstrated age-appropriate knowledge of linguistic structure (both receptively and expressively) on several standardized tests. However, in spontaneous conversation, the length and syntactic complexity of language used was substantially greater for the most talkative child. Discourse differences included a greater tendency to respond to comments and self-initiate questions as talkativeness increased. In addition, these children differentially influenced their adult conversational partners' discourse, but not their average length of utterance. (Author/FL)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

U S DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

ED184145

A Linguistic Comparison of Talkative and Reticent Three Year Olds

Anne Van Kleeck, Ph.D.
Assistant Professor
Department of Speech Communication
University of Texas at Austin
Austin, Texas 78712

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Anne Van Kleeck

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

Paper presented at the annual meeting of the
American Educational Research Association
Boston, Massachusetts
April, 1980

C S220 54 74

SUMMARY

This exploratory study investigated the communicative behaviors which differentiate talkative from reticent children. Four children who varied in degree of talkativeness were observed in naturalistic interactions with six to eight different adults. All four children had age appropriate knowledge of linguistic structure (both receptively and expressively) on several standardized tests. However, in spontaneous conversation, the length and syntactic complexity of language used was substantially greater for the most talkative child. Discourse differences included a greater tendency to respond to comments and self-initiate questions as talkativeness increased. Furthermore, these children differentially influenced their adult conversational partners' discourse, but not their average length of utterance.

A Linguistic Comparison of Talkative and Reticent Three Year Olds

Anne Van Kleeck

The University of Texas at Austin

The global concept of reticence has been of longstanding interest to researchers in several disciplines, who have accordingly generated a variety of labels to discuss this construct (e.g., audience anxiety or sensitivity, shyness, stage fright, communication apprehension). Much of this work has focused largely on variables "surrounding" reticence, such as what occurs before (causes), alongside (correlates), and after (consequences). There has been little attempt, however, to look at its actual communicative behaviors.

The need to determine the actual differences in linguistic behaviors in reticence stems from two sources. First of all, an understanding of the nature of communication in reticence may help clarify theoretical issues regarding both causes and social consequences. Second, there are important training issues to consider. The plethora of negative consequences associated with reticence in academic, economic, and social realms is well documented.

The present study addresses the concept of reticence from a developmental perspective. In terms of causes of reticence, such an approach enables us to compare the linguistic skills of reticent and talkative children to determine their nature and the ways in which they change over time. Regarding training issues, results could lead to the establishment of possible communication deficits and subsequent intervention to learn more effective communication skills. To do this, however, we need to ascertain in some detail the communicative behaviors which differentiate talkative from less talkative children.

The multidimensional nature of language necessitates using various perspectives

for this analysis. Since talkative and reticent children may well vary on some dimensions but not on others, it is necessary to use a broad-based analytic scheme. Here we will consider three broad components of language widely recognized in the language acquisition literature, these being (1) linguistic form (i.e., structural aspects of language), (2) semantic content (or the meaning encoded), and (3) discourse features (i.e., the use of language in context). Although there is currently no data available on these three aspects of language for reticent children, it is possible to discuss some possible outcomes.

Concerning linguistic form, reticent children should have the basic linguistic tools commensurate with their chronological age. That is, their disinclination to engage in conversation is probably not due to pathological or delayed development of the formal aspects of language. From this point of view, one can predict that the language of talkative and reticent children will be similar in its syntactic complexity. On the other hand, performance does not necessarily reflect competence. Consequently, a reticent child may be less inclined in certain social situations to use the full range of syntactic structures he or she can comprehend and produce.

The semantic content of the child's language refers to the meanings encoded in their language which reflect their cognitive organization of the objects, events, and relations in the world. At least in the adult population, intelligence or general cognitive ability has not been found to correlate with communication anxiety (McCroskey, Daly, & Sorensen, 1976). As such, there appears to be little basis for expecting a difference in the semantic notions encoded by talkative versus reticent children. However, an emerging literature in language development does suggest one possible source of difference between talkative and reticent children in the semantic domain.

First, following Halliday (1973, 1975), we can say that children tend to emphasize either the ideational (object-oriented) or the interpersonal (socially-oriented) function of language (e.g., Dore, 1974; Horgan, 1979; Nelson, 1973, 1975, 1978; Rosenblatt, 1975). Further, it may be that this ideational versus interpersonal distinction reflects "the effects of genuine differences in cognitive style on children's language acquisition" (Bowerman, 1978, p. 360). If so, a reticent child's low rate of turn-taking in conversation may be the result of an object-oriented rather than a person-oriented cognitive style. Indeed, Rosenblatt (1975) found that the referential (ideational) style in infants 9 to 24 months of age correlated negatively with social attention and interaction. The possible relationship between an object-oriented cognitive style and reticence would predict a proportionally higher rate of utterances containing semantic notions (referring to ideas about objects, events, and relationships in the world) and a lower rate of nonsemantic utterances (part of a social interaction only and lacking reference to ideas about the world).

Lastly, we can look at the discourse parameters of talkative and reticent children. While it is clear these two groups of children differ by definition in the quantity of language they contribute to a conversation, the important question is to determine if qualitative differences exist. If not, we could conclude that reticent children have the same discourse skills, but that they simply apply the skills they do have less frequently. If qualitative differences do exist, however, than we need to determine what the different patterns of discourse behaviors in talkative and reticent children are.

Children can participate in conversations in numerous ways. They can act as responders to topics initiated by others. In very general terms, their responses can be to questions or comments generated on a topic. The nature of the child's response can also vary. He or she can respond verbally or nonverbally, with

questions or comments. The amount of information in the response can also vary. Children can offer only the information solicited by questions or merely acknowledge comments. Alternately, they can add additional information to the topic. Children can also initiate topics of their own. Here again, various discourse strategies are available. Very broadly, they can ask questions or make comments. Their conversational partners also have a variety of response choices. To reiterate the quantative versus qualitative question, we want to determine if talkative and reticent children of the same age use these various discourse devices with similar relative frequencies or do they exhibit different patterns in using them.

So far, I have discussed the question of reticence only in terms of the nature of the child's language. Feedback models of child-directed talk, however, show that the adult and child are simultaneously influencing each others behavior. In order for feedback from the child to shape a particular aspect of the adult's child-directed talk, the child must differentially respond to that aspect. One feedback model of child-directed talk called the conversational model has recently been supported by several investigators (Newport, 1976; Newport, Gleitman, & Gleitman, 1977; Shatz & Gelman, 1977; Snow, 1977). According to this model, one subgoal of the adult in talking to a young child is to elicit responses from the child. The child's social skills in using language for conversational interaction would thus provide the primary feedback to the adult in meeting this goal. Since talkative and reticent children differ in their conversational interactions, at least in terms of quantity, the conversational model predicts that adults would interact differently with talkative versus reticent children.

Other researchers have evolved alternate explanations of the causes for adult language modifications when addressing children. Many have suggested that a child's language comprehension level determines child-directed talk modifications (Bohannon

& Marquis, 1977; Cross, 1977; Ervin-Tripp, 1971; Glanzer & Dodd, 1975; Lord, 1975; Wedell-Monnig & Westerman, 1977). This model predicts similarities in adult interaction with talkative and reticent children, since both types of children are equally proficient in their language comprehension skills.

Since language is multidimensional, it is further possible that both of the above models may be partially correct. That is, each model may be true for certain aspects of the linguistic code but not for other aspects. A broad based analytic scheme could again potentially illuminate this particular possibility.

The purpose of the present study was to conduct an exploratory investigation of the linguistic aspects of reticence in young children. Three year olds who varied in degree of talkativeness were observed in a semi-naturalistic setting in order to determine the existence and nature of linguistic differences in their communicative interactions with adults. Furthermore, the effects on the adults of interacting with children who varied along the dimension of talkativeness were of interest. Rather than attempting to cover all aspects of language in depth in this initial attempt, the purpose was to sample each area, thereby pointing to those areas that might be most productively explored in greater depth in future research.

METHOD

Subjects. Four three year old girls served as subjects. Two of the children had participated in a previous study where it was informally noted that they differed in the amount of talk they each contributed to spontaneous conversations. Two other children were selected by preschool teacher report. The teacher was asked to generate a list of talkative and a list of quiet three year olds.

The second two subjects were randomly chosen from this list. Following data collection, a post hoc definition of the talkative/reticent dimension was generated on the basis of the average number of child utterances per 100 adult utterances. The averages were obtained from interactions with eight adults for two of the children and six adults for the other two children. From the least to most talkative child, there averages were 36, 40, 63, and 92, respectively.

The results of several standardized tests indicated that all four children were developing language structure normally for their age level. Each child scored within one standard deviation of the mean for her chronological age on tests of receptive vocabulary (Peabody Picture Vocabulary Test, Dunn, 1959), receptive syntax (Test for Auditory Comprehension of Language, Carrow, 1973), and spontaneous expressive language (developmental sentence scoring procedure presented in Developmental Sentence Analysis, Lee, 1974).

All four children attended preschool. The native language spoken in each child's home was Standard American English. While the children served as the main subjects of the study, the adults' verbal behavior in the interaction was also of interest. The adults were all college educated females from the Seattle and Austin areas. All spoke Standard American English as their native language.

Procedures. Each child interacted individually with six to eight previously unfamiliar adults. In this way, differences would occur only if the children were longitudinally consistently different in their use of language in a similar social context. This assured that child differences were not solely a function of interacting with a particular conversational partner. That is, the design ruled out the possibility that the adult member of the conversational dyad was the primary cause of the child's response pattern. Furthermore, the design allowed determining the influence of the children on the adults.

Each child played with the adults for one half hour in a small room at a university speech and hearing clinic. The investigator was not present during the play session. Each session was videorecorded using a camera mounted in the room that was operated from behind one-way observational mirrors or from a control room. Prior to each session, the adult was simply told to interact naturally with the child for the duration of the one half hour session.

Data. The data consisted of both adult and child talk occurring during the free play session. To obtain samples for analysis, each videorecorded session was transcribed until 100 adult utterances were obtained. In total, there were 2,800 adult utterances and the accompanying child utterances. For all the samples, both adult and child language and the nonlinguistic situational context were transcribed according to conventions set forth by Bloom, Hood, and Lightbown (Bloom & Lahey, 1978, Appendix A.1).

Analytic scheme. For the category of linguistic form, a very gross measure of syntactic development, mean length of utterance (MLU), was used. The very widespread use of this measure was felt to lend to its interpretability in the present context. MLU was computed for both child and adult language. It was based on a morpheme count computed according to criteria adapted from Brown (1973). MLU determines the average length of utterances only. A second measure of linguistic form was used to determine syntactic complexity. To do this, the children's proportional frequency of complex sentences was used as a gross measure of the relative frequency of the production of structurally complex sentences.

The semantic content measures were chosen to provide a general test of the possible influence of an ideational versus interpersonal bias on the frequency of semantic notions expressed by the children. In a sense, it was actually a semantic

versus social emphasis measure. In each adult-child interaction, the child's utterances were dichotomized into those containing semantic notions and those which were nonsemantic (part of a social routine and not reflecting ideas about the world). Any utterance containing one or more of the semantic notions proposed by Bloom and Lahey (1978) were considered semantic. All other utterances fell into the nonsemantic category. This category included such things as social routines (greetings and polite forms),memorized routines (verses, songs, lines from stories, etc.), attention getting devices ("hey" or calling of a name), affirmative comments, exclamations, and sounds accompanying toys.

The discourse analysis was the most elaborate since it was believed that this aspect of language skill would probably best discriminate talkative from reticent children. The analysis was approached using a matrix categorization scheme which allowed the simultaneous coding of the behaviors of both partners in the conversational interaction. This allowed consideration of the discourse features of both the adult and child, and how they interacted. The categories, presented in Table 1, were adapted from Blank, Gessner, and Esposito (1979). At the most general level, this scheme determines who initiated the topic. At the next level, the utterance of the initiator was classified broadly into either an oblige or a comment. Obliges require verbal responses. They are nearly always in a question form. The comment category included all other utterances. The third and final level of this analysis considered the responses of the noninitiator, if any. The four categories included here were (1) adequate response, (2) inadequate response, (3) no response, and (4) other. In the present study, the adequate response category was further divided into those which merely met the conversational obligation, and those which met but also elaborated or expanded in giving information.

Reliability. Four randomly chosen samples were both transcribed and scored by three independent judges to obtain reliability. For transcription, percent agreement for segmentation of the corpus into utterances, morpheme agreement, description of the nonlinguistic context, and for categorization of utterances as a question ranged from 89 to 99 percent. For scoring procedures, interjudge agreement ranged from 98 to 99 percent for mean length of utterance; 82 to 88 percent for placing utterances into the semantic versus nonsemantic categories; and from 72 to 92 for the discourse analysis scheme.

RESULTS AND DISCUSSION

Children's language

Linguistic form. The results for the mean length of utterance measure (MLU), going from the least to the most talkative child were 2.8, 2.7, 3.0, and 4.8. Since this measure includes all intelligible utterances, it shows that the most talkative child used much longer sentences on the average than the other three children.

Regarding structural complexity, pre-testing using Lee's (1974) developmental sentence scoring technique established that all the children were capable of producing age-appropriate syntax. This system requires that only utterances containing both a subject and a predicate be included in the analysis. All other utterances are eliminated, precluding a determination of how frequently the children used structurally complex utterances. The issue of relative frequency of complex syntax was addressed by the measure which looked at the proportional frequency of complex sentences occurring in each child's spontaneous discourse. The proportions obtained on this measure, again, going from the least to the most

talkative child were 4, 2, 4, and 12. Here again, the most talkative child has distinguished herself. The proportion of her spontaneous language consisting of complex sentences was three times greater than any of the other children. From this data, we can tentatively conclude that, although all four children had similar competence, only the most talkative child frequently reflected the extent of this competence in her actual spontaneous linguistic performance.

Semantic/social content. The proportions of utterances containing nonsemantic (social) content, going from the least to the most talkative child, were 23, 35, 42, and 11, respectively. As such, a semantic versus social tendency in using language did not appear to be systematically related to the degree of talkativeness. Although this appeared to be plausible for the first three children who showed a continuing rate of increase in social speech, the fourth and most talkative child had in fact the very lowest proportion of nonsemantic (social) utterances in her speech. From the data of the present study, it appears that the interpersonal versus ideational strategies which have been well documented in the language acquisition literature are in fact orthogonal to the talkative/reticent dimension.

Discourse analysis. Since the interactions in this study were naturalistic, the raw number of comments and obliges emitted by each conversational partner of course varied from one interaction to the next. Consequently, the number of opportunities for responses also varied. In order to make the data comparable, then, it was necessary to consider the proportional rather than absolute frequencies with which behaviors occurred.

The data generated from the discourse analysis matrix presented in Table 1 were analyzed in a number of ways. First of all, the proportion of the total number of adult comments and obliges each child responded to adequately are

presented in Figure 1. An overall view of this graph shows that along the entire dimension of talkativeness, all the children had a greater response rate to obliges than to comments. A closer analysis shows that, except for the most reticent child, all of the children gave very similar rates of response to obliges. Adequate responding to comments, on the other hand, showed a clear relationship to the degree of talkativeness. The more talkative the child, the more frequently she gave adequate responses to comments. As such, it is not simply the case that the more reticent children had the same relative pattern of responding but merely emmited fewer responses to comments and obliges alike (which would indicate a quantitative difference). Instead, the data presented in Figure 1 indicated a qualitative difference between the children, since the relative patterns of response were indeed different.

The responses to obliges observed are in line with normal developmental data. Responding to questions "is among the first clearly discourse-bound obligations to which children are sensitive" (Ervin-Tripp & Miller, 1977, p. 14). Since this is a very early emerging discourse skill, it is not surprising that by three years of age, both the reticent and talkative children showed equivalent proficiency, reflected in their similar response rates.

While obliges <u>explicitly</u> require a response from a conversational partner, Keenan (1974) points out that even comments seem to lead to an anticipation, and thus an <u>implicit</u> obligation, for response. "A speaker uttering a comment expects the hearer to ACKNOWLEDGE that comment. That is, once a comment has been produced by a speaker, the co-present interlocuter is normally obligated to respond verbally to that comment" (Keenan, 1974, p. 166). An awareness of this less explicit conversational obligation develops later than an awareness that obliges require responses. However, even by age 2;9, Keenan's twin boys demonstrated remarkable

proficiency regarding this particular conversational expectation. Out of 76 conversational turns in their dialogue containing comments, only three received no verbal acknowledgement. Further supporting Keenan's claim that comments required responses was her observation that the boys tended to repeat a comment until it was finally acknowledged. Although Keenan's children were engaged in peer as opposed to adult-child discourse, her findings do suggest that children barely three years of age are quite capable of responding to nearly all the comments posed by their conversational partner. As such, the results in this study tentatively imply that reticence may involve a discourse skill delay.

The children's responses to adult obliges and comments were further analyzed into (1) those which met the conversational obligations and, (2) those which met and also offered additional unsolicited information. For example, if a child responded "yes" to a yes/no question posed by an adult, she was merely meeting the response obligation. On the other hand, when asked "How old are you?," the child might respond, "Three and my sister is nine." Here the child has met the response obligation and added further information. Figure 2 contains the proportion of adult comments and obliges to which the children offered further information in their response. All of the children very rarely offered additional information in response to obliges. This finding supports other empirical evidence that questions can inhibit spontaneous conversation in children (see Hubbell, 1977, for discussion). In response to comments posed by the adults, however, there was a tendency for additional information to be included more frequently as the degree of talkativeness of the child increased. Here again, responses to comments appear to distinguish the talkative from the less talkative children, while responses to obliges do not.

To this point, we have considered children's responses to adult-initiated

utterances only. While these constituted the vast majority of utterances in all of the adult-child interactions, the nature of child-initiated utterances in the conversations was also of interest. The mean proportion of obliges and comments occuring in the child initiated utterances are presented in Figure 3. Looking at the children's discourse from this orientation, only the most talkative child clearly distinguished herself from the other three children. While the other three children's self-initiated utterances were predominantly comments, the most talkative child had a far greater proportion of obliges than comments. Since this child was requiring adult responses as well as commenting and responding herself, she appeared to be a more active and controlling participant in the conversations. This resulted in a more symmetrical discourse pattern, since the onus of maintaining the conversation was lightened for the adult member of the dyad. In this sense, these particular adult-child dialogues resembled the more symmetrical interactions characteristic of conversation between equal status (for adults) or equal age (for children) participants (e.g., Giles, 1973, 1977; Lougee, Grueneich, & Hartup, in press). It appears then, that the symmetry of the conversational exchange may be one further parameter which distinguishes talkative from less talkative children. One might speculate that more proficient communicators are able to adapt their communication to partners who differ greatly from themselves. In this sense, the most talkative child appears to be a more proficient communicator.

Summary. The gestalt picture which emerges regarding the spontaneous language produced by children who vary along the dimension of talkativeness is not a surprising one--both similarities and differences exist. Furthermore, some domains

vary from child to child but appear not to be related in any systematic way to degree of talkativeness. The children were similar in their response rate to obliges posed by the adults. They also tended not to add information when responding to obliges. They varied, although unsystematically, in their propensity to produce social versus semantic speech. A number of tentative systematic differences did emerge. In many cases, these findings distinguished only the most talkative child or the most shy child from the other three. It may be that a certain degree of talkativeness needs to be achieved before measurable differences along the talkative/reticent dimension emerge. Further research using greater numbers of children might attempt to establish the point at which linguistic differences emerge. The differences observed in the present study involved both the structural and pragmatic aspects of language. The length and syntactic complexity of language used in ongoing conversation was substantially greater for the most talkative child. As talkativeness increased, so did the tendency to respond to comments (and to add additional information when responding to comments) and to produce self-initiated obliges. In some respects, the less talkative children appeared to have less advanced discourse skills.

Influence on adults

Linguistic form. The mean length of utterance of the adults did not vary as a function of the degree of talkativeness of their young conversational partners. The means for all of the adults interacting with each child, going from the least to most talkative child partner, were 5.5, 5.2, 5.5, and 5.3, respectively. Many developmental studies have shown a close positive correlation between adult and child MLU. That is, as children develop and increase their MLU, adults addressing them correspondingly increase their own MLU (Cross, 1975; Fraser & Roberts, 1975;

Longhurst & Stepanich, 1975; Moerk, 1975; Phillips, 1973; Snow, 1972). The adults' lack of adjustment in the present study indicated that they were perhaps somehow aware that all of the children had similar linguistic competence. These findings indirectly support the notion postulated by the comprehension model of child-directed talk modifications. According to this position, a child's language comprehension level shapes the modifications that adults make in their child-directed talk. While it cannot be directly determined, it is possible that the adults in the present study used similar MLU's, regardless of the talkativeness of the child they were interacting with, because they perceived that the children all had equivalent comprehension levels.

Discourse analysis. The patterns presented in Figures 4 and 5 show a definite influence of the discourse pattern of the children on their adult interlocuters. In Figure 4, two sets of data are depicted, (1) the proportion of each child's total responses that were to comments, and (2) the proportion of all the adult-initiated utterances that were comments. The correspondence here is striking. The same pattern (in the opposite direction) emerges in Figure 5 regarding obliges. From these results, it appears that the adults were tuned to feedback in terms of each child's overall response pattern. As such, the adults' proportion of comments reflects the children's proportions of adequate responses that are to comments. Regarding the discourse aspects of the adult-child interaction, it appears that the conversational model of child-directed talk has been supported. This model suggests that the child's conversational skills, reflected in their responses which serve as feedback to the adults, are responsible for adult language modifications. It seems, then, that both models of child-directed talk modifications have been supported, although for different aspects of the linguistic code.

CONCLUSIONS

This exploratory investigation of the communicative behaviors which differentiate talkative from reticent child has pointed to several areas for further investigation. The data presented have suggested that both the structural and discourse aspects of language can be used to make such a distinction. Furthermore, children who vary along the talkative/reticent dimension seem to influence their adult conversational partner's discourse, but not their average length of utterance. The notion that reticence may be a manifestation of a discourse delay occurring in conjunction with age-appropriate knowledge of linguistic structure awaits further, preferably longitudinal, investigation before more definite conclusions can be drawn.

ACKNOWLEDGEMENTS

I'd like to thank Robert Hopper and David Ingram for their very helpful suggestions regarding the ideas presented in this paper. I am also grateful to Nancy Sitzer and Janet Walker for their help in data analysis. And I owe an additional thank you to Nancy Sitzer for the many long hours spent transcribing videotapes.

REFERENCES

Blank, M., Gessner, M. and Esposito, A. Language without communication: A case study. Journal of Child Language, 1979, 6, 329-352.

Bloom, L. and Lahey, M. Language development and language disorders. New York: John Wiley, 1978.

Bohannon, J. and Marquis, A. Children's control of adult speech. Child Development, 1977, 48, 1002-1008.

Bowerman, M. Words and sentences: Uniformity, individual variation, and shifts over time in patterns of acquisition. In F. Minifie and L. Lloyd (eds.) Communicative and cognitive abilities: Early behavioral assessment. Baltimore: University Park Press, 1978.

Brown, R. A first language: The early stages. Cambridge, Mass.: Harvard University Press, 1973.

Carrow, E. Test for Auditory Comprehension of Language. Austin, Texas: Urban Research Group, 1973.

Cross, T. Some relationships between mothers and linguistic level in accelerated children. In E. Clark (ed.), Papers and Reports on Child Language Development (no. 10). Stanford, Calif.: Stanford University, Department of Linguistics, Sept. 1975.

Cross, T. Mothers' speech adjustments: The contribution of selected child listener variables. In C. Snow and C. Ferguson (eds.), Talking to children: Language input and acquisition. Cambridge, England: Cambridge University Press, 1977.

Dore, J. A pragmatic description of early language development. Journal of Psycholinguistic Research, 1974, 3, 343-350.

Dunn, L. Peabody Picture Vocabulary Test. Circle Pines, Minn.: American Guidance Service, 1959

Ervin-Tripp, S. An overview of theories of grammatical development. In D. Slobin (ed.), The ontogenesis of grammar: A theoretical symposium. New York: Academic Press, 1971.

Ervin-Tripp, S. and Miller, W. Early discourse: Some questions about questions. In M. Lewis and L. Rosenblum (eds.), Interaction, conversation, and the development of language. New York: John Wiley, 1977.

Fraser, C. and Roberts, N. Mothers' speech to children at four different ages. Journal of Psycholinguistic Research, 1975, 4, 9-16.

Giles, H. Accent mobility: A model and some data. Anthropological Linguistics, 1973, 15, 87-105.

Giles, H. Social psychology and applied linguistics: Towards an integrative approach. ITL: Review of Applied Linguistics, 1977, 27-40.

Glanzer, P. and Dodd, D. Developmental changes in the language spoken to children. Paper presented at the biennial meeting of the Society for Research in Child Development, Denver, April, 1975.

Halliday, M. Explorations in the functions of language. London: Edward Arnold, 1973.

Halliday, M. Learning how to mean: Explorations in the development of language. London: Edward Arnold, 1975,

Horgan, D. Nouns: Love 'Em or Leave 'Em. Address to the New York Academy of Sciences. May, 1979.

Hubbell, R. On facilitating spontaneous talking in young children. Journal of Speech and Hearing Disorders, 1977, 42, 216-231.

Keenan, E.O. Conversational competence in children. Journal of Child Language, 1974, 1, 163-183.

Lee, L. Developmental sentence analysis. Evanston, Ill.: Northwestern University Press, 1974.

Longhurst, T. and Stepanich, L. Mothers' speech addressed to one-, two-, and three-year old normal children. Child Study Journal, 1975, 5, 3-11.

Lord, C. Is talking to baby more than baby talk? A longitudinal study of the modification of linguistic input to young children. Paper presented at the biennial meeting of the Society for Research in Child Development, April, 1975.

Lougee, M., Grueneich, R. and Hartup, W. Social interaction in same- and mixed-age dyads of preschool children. Child Development, in press.

McCroskey, J., Daly, J. and Sorensen, G. Personality correlates of communication apprehension: A research note. Human Communication Research, 1976, 2, 376-380.

Moerk, E. Verbal interactions between children and their mothers during the preschool years. Developmental Psychology, 1975, 11, 788-794.

Nelson, K. Structure and strategy in learning to talk. Monographs of the Society for Research in Child Development, 1973, 38, (Serial No. 149.).

Nelson, K. The nominal shift in semantic-syntactic development, Cognitive Psychology, 1975, 7, 461-479.

Nelson, K. Early speech in its communicative context. In F. Minifie and L. Lloyd (eds.), Communicative and cognitive abilities-Early behavioral assessment. Baltimore: University Park Press, 1978.

Newport, E. Motherese: The speech of mothers to young children. In N. Castellan, D. Pisoni and G. Potts (eds.), Cognitive theory, Vol. 2, Hillsdale, N.J.: Lawrence Earlbaum Associates, 1976.

Newport, E., Gleitman, H. and Gleitman, L. Mother, I'd rather do it myself: Some effects and noneffects of maternal speech style. In C. Snow and C. Ferguson (eds.), Talking to children: Language Input and acquisition. Cambridge, England: Cambridge University Press, 1977.

Phillips, J. Syntax and vocabulary of mothers' speech to young children: Age and sex comparisons. Child Development, 1973, 44, 182-185.

Rosenblatt, D. Learning how to mean: The development of representation in play and language. Paper presented at the Conference on The Biology of Play, Farnhara, England, 1975.

Shatz, M. and Gelman, R. Beyond syntax: The influence of conversational constraints on speech modifications. In C. Snow and C. Ferguson (eds.), Talking to children: Language input and acquisition. Cambridge, England: Cambridge University Press, 1977.

Snow, C. Mothers' speech to children learning language. Child Development, 1972, 43, 549-565.

Snow, C. The development of conversation between mothers and babies. Journal of Child Language, 1-22.

Wedell-Monnig, J. and Westerman, T. Mothers' language to deaf and hearing imparied infants: Examination of the feedback model. Paper presented at The Second Annual Conference on Language Development, Boston University, October, 1977.

Table 1 Matrix used for the discourse analysis of the adult-child interactions (adapted from Blank, Gessnet, and Esposito, 1979).

Child as speaker-responder	Adult as speaker-initiator		Adult as speaker-responder	Child as speaker-initiator	
	Comments	Obliges		Comments	Obliges
Adequate			Adequate		
a) met the obligation			a) met the obligation		
b) elaborated			b) elaborated		
Inadequate			Inadequate		
No response			No response		
Other			Other		

Figure 1. Proportion of adult comments and obliges to which each child gave adequate responses.

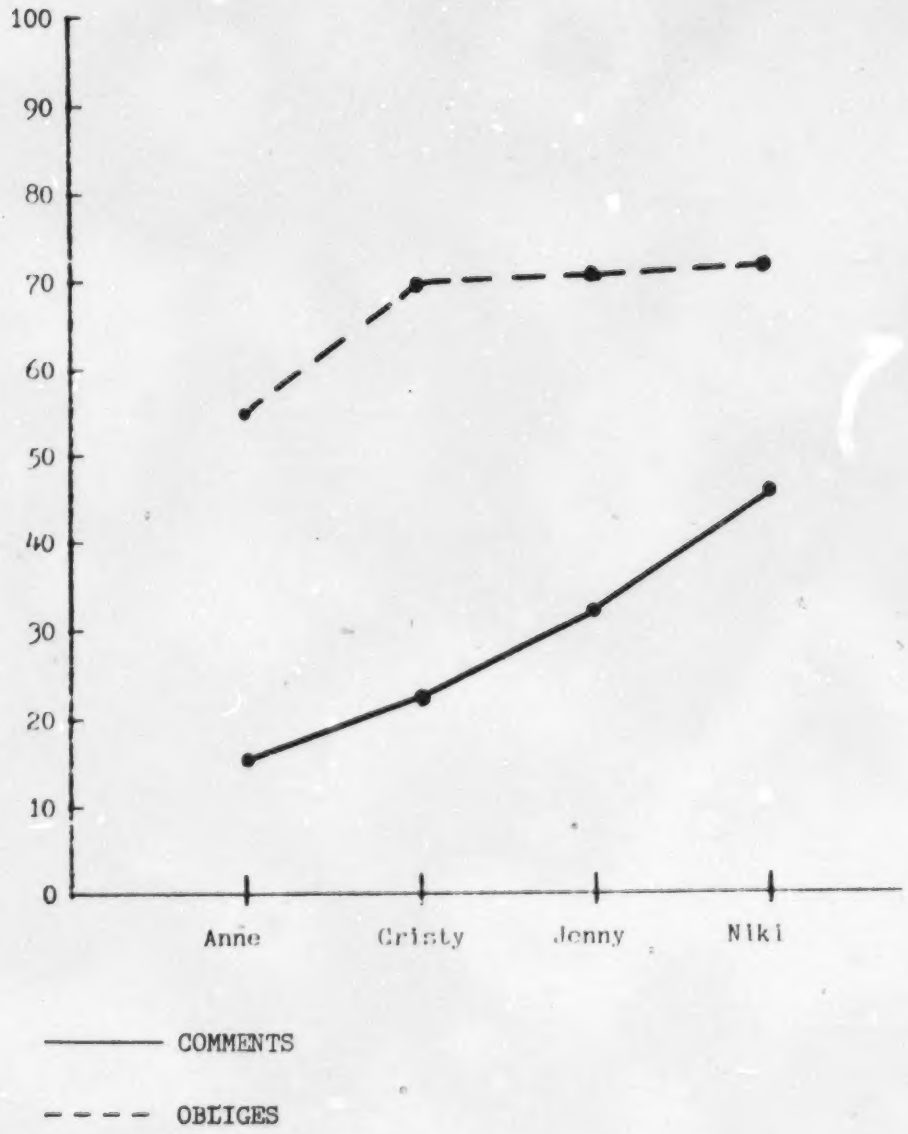

Figure 2. Proportion of adult comments and obliges to which each child added additional information when responding.

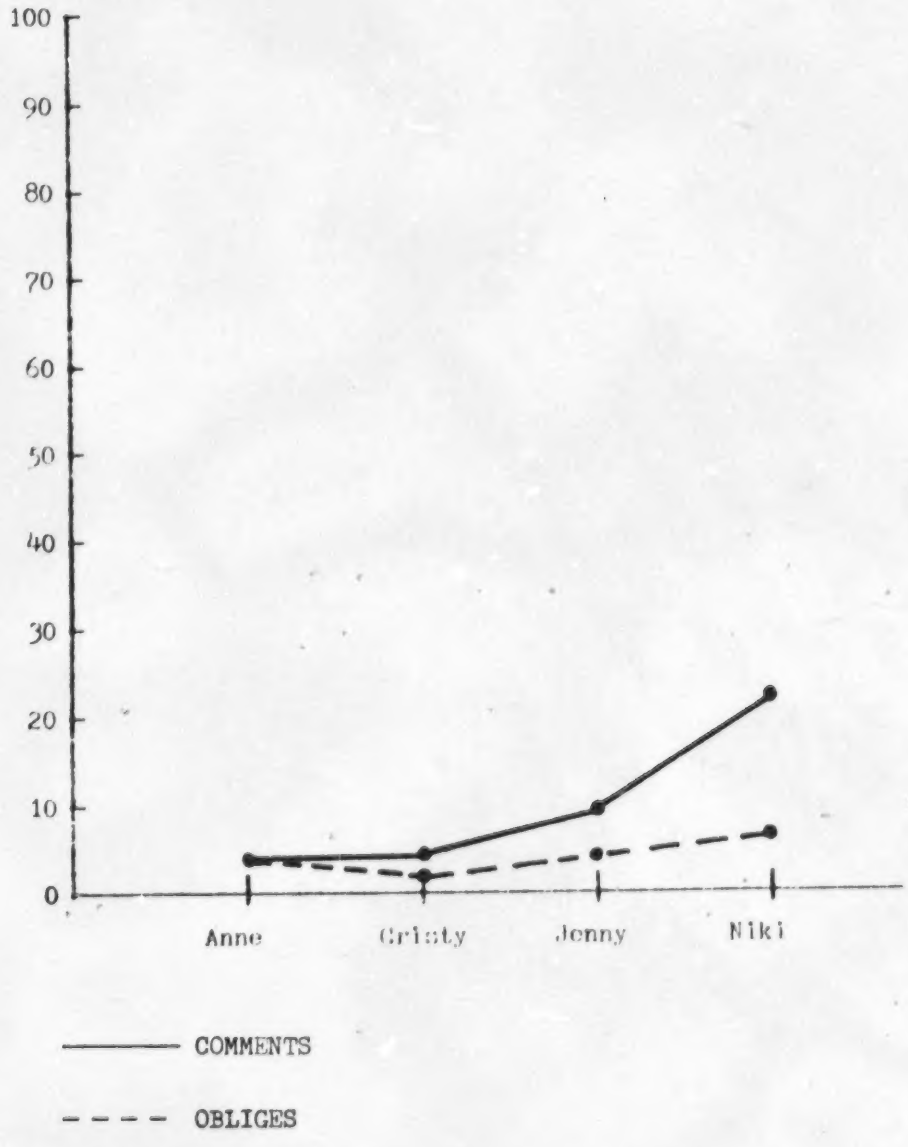

Figure 3. Mean proportion of obliges and comments in each child's child-initiated utterances.

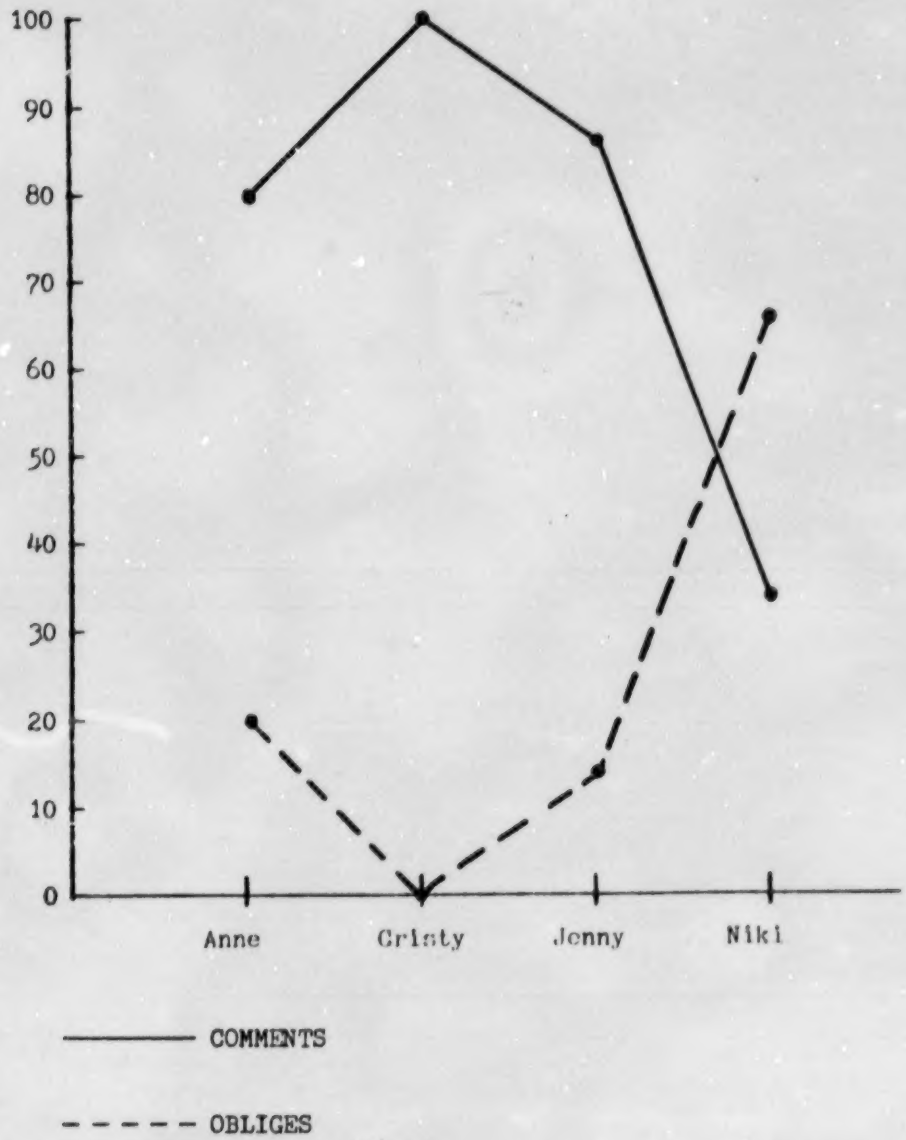

Figure 4. Proportion of each child's total adequate responses that were to adult comments and the proportion of all the adult-initiated utterances that were comments.

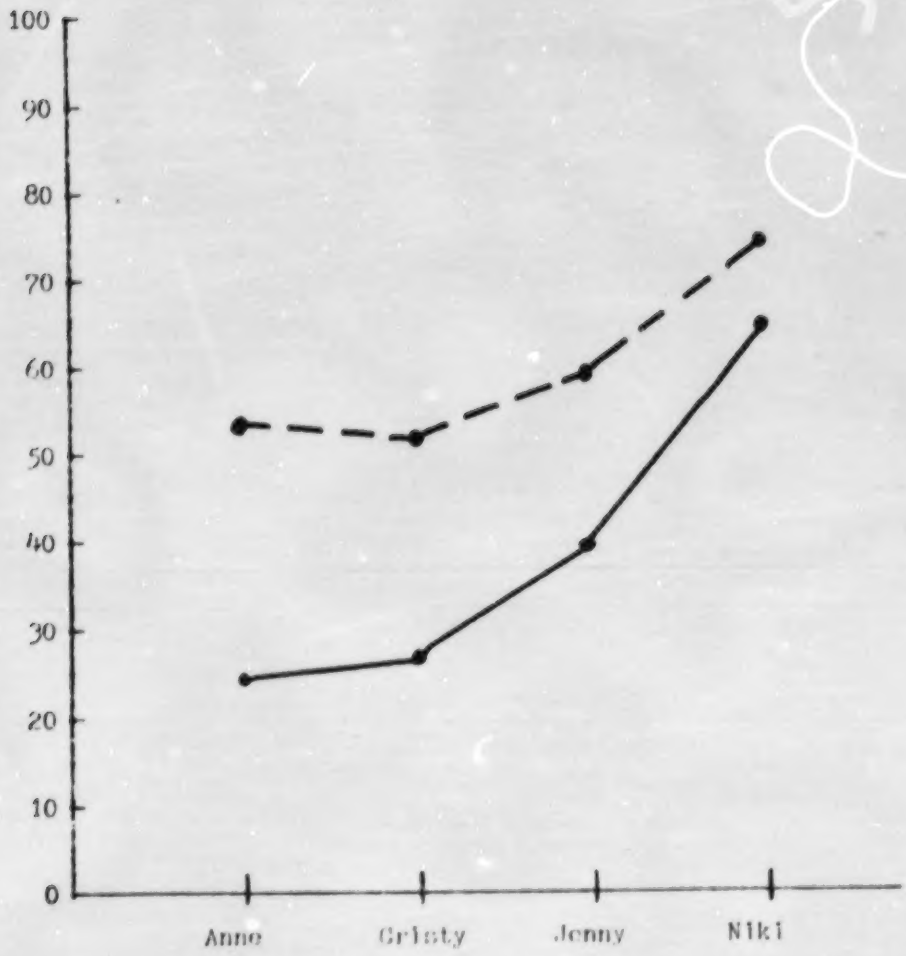

Figure 5. Proportion of each child's total adequate responses that were to obliges and the proportion of all the adult-initiated utterances that were obliges.